I claim:

1. A Fibre Channel Arbitrated Loop interconnect system comprising:

a first port,

a second port,

said first and second ports including port logic to monitor certain arbitrated loop primitives,

a crossbar switch coupled to said first and second ports,

a route determination apparatus including a routing table consisting of ALPA addresses and their associated ports, the route determination apparatus coupled to each port and the crossbar switch,

whereby the crossbar switch creates paths between the ports based on arbitrated loop primitives.

2. The interconnect system of claim 1 whereby the arbitrated loop primitives that cause the crossbar switch to create paths between ports includes one or more of the following: ARB, OPN and CLS.

3. A system for interconnecting Fibre Channel Arbitrated Loop devices comprising:

a first Arbitrated Loop containing one or more Fibre Channel arbitrated loop devices,

a second Arbitrated Loop Device,

a Fibre Channel arbitrated loop interconnect system, the interconnect system including:

a first port containing port logic coupled to the first Arbitrated Loop,

a second port containing port logic coupled to the second Arbitrated Loop,

route determination apparatus for selecting a route between ports,

the said route determination apparatus selecting routes based on received Fibre Channel Arbitrated Loop primitives from the ports and including a routing table containing ALPA addresses and their associated ports,

connectivity apparatus coupled to the first and second ports and to the route determination apparatus for switching frames between ports under control of the route determination apparatus,

the said connectivity apparatus is a crossbar switch,

whereby Fibre Channel frames are transferred between a device on the first Arbitrated Loop and the second Arbitrated Loop Device.

4. The interconnect system of claim 3 whereby the arbitrated loop primitives that cause the crossbar switch to create paths between ports includes one or more of the following: ARB, OPN and CLS.

5. The interconnect system of claim 3 including a R_RDY counter to count R_RDY's before the OPN response is received by the originating Fibre Channel Arbitrated Loop Device that is connected to the interconnect system.

6. A system for interconnecting Fibre Channel Arbitrated Loop devices comprising:

a first Fibre Channel Arbitrated loop switch,

a second Fibre Channel Arbitrated loop switch,

said first and second Fibre Channel Arbitrated Loop Switches including port logic, connectivity apparatus and route determination logic,

the route determination logic creating routes based on the receipt of certain arbitrated Loop primitives,

whereby Said first and second loop switches are interconnected by two or more Fibre Channel Arbitrated Loop links and transfer frames on both ports.

7. A system for interconnecting Fibre Channel Arbitrated Loop Devices comprising:

a plurality of Fibre Channel Arbitrated Loop ports each including port logic,

a route determination apparatus,

a crossbar switch adapted to connect the Fibre Channel Arbitrated Loop ports based on the receipt of certain Fibre Channel Arbitrated Loop primitives,

whereby a LIP received on said first port is selectively propagated to one or more of the ports.

8. A system for interconnecting Fibre Channel Arbitrated Loop Devices comprising:

a plurality of Fibre Channel Arbitrated Loop ports each including port logic,

a route determination apparatus,

a connectivity apparatus, and

logic implementing predefined loop control criteria to enforce fairness.

9. A system for interconnecting Fibre Channel Arbitrated Loop Devices of claim 8, wherein the fairness logic serves to limit the number of times a connected device opens another device.

10. A system for interconnecting Fibre Channel Arbitrated Loop Devices of claim 9, wherein the fairness logic serves to limit the number of times a connected device sequentially opens another device.

11. A system for interconnecting Fibre Channel Arbitrated Loop Devices of claim 8, further including a counter to count the number of opens.

12. A system for interconnecting Fibre Channel Arbitrated Loop Devices of claim 11, wherein the counter counts sequential opens.

13. A system for interconnecting Fibre Channel Arbitrated Loop Devices of claim 8, wherein the logic proactively closes a device.

14. A system for interconnecting Fibre Channel Arbitrated Loop Devices of claim 8, wherein the ports are assigned different access priorities.